DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: <u>SF/ALA</u> Rte: <u>80</u> PM: <u>13.2/13.9</u>

File #: <u>69.28</u>

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary Report No: WIR-000489
Address: 333 Burma Road Date Inspected: 20-Sep-2007

City: Oakland, CA 94607

Project Name: SAS Superstructure OSM Arrival Time: 2030
Prime Contractor: American Bridge/Fluor Enterprises, a JV OSM Departure Time: 800

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island Location: Shanghai, China

CWI Name: CWI Present: Yes Lu Jian Ping & Hua Li wei No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A **Electrode to specification:** Yes No N/A Weld Procedures Followed: Yes No N/A **Oualified Welders:** Yes No N/A **Verified Joint Fit-up:** Yes No N/A N/A **Approved Drawings:** Yes No N/A Approved WPS: Yes No Yes N/A **Delayed / Cancelled:** No

Bridge No: 34-0006 **Component:** Caltrans Mockup

Summary of Items Observed:

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up, 77M, 89M and 114M, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

ItemDescriptionWBSDwg No.Status1Skin Plate A (lower)NANAWork In Progress

Mock-Up 114M, Skin Plate A (lower section): Caltrans QA Inspector observed flux cored arc welding (FCAW) in progress at stiffener plate, mp1002 to skin plate MA107. The weld number is identified as MUSC-MA107-5 & 6, partial joint penetration (PJP), double bevel T-joint. The welders are observed welding fill pass weld in the horizontal position. Caltrans QA Inspector observed welder chipping and wire brushing during interpass weld cleaning. The welders are identified as Mr. Cao Henjin, welder stamp 66420 and Mr. Wen Yanyan, welder stamp 066734. The welders are using welding procedure specification WPS-B-T-2332-TC-P5-F, Revision 0. Caltrans QA Inspector observed ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Lu Jian Ping and Bureau Veritas inspectors, Mr. Hua Li wei and Mr. Li wen shong monitoring welding activities at the workstation. Caltrans QA Inspector measured current welding parameters at approximately 305 amps, 32 volts and 310 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. FCAW welding consumable is verified and identified as Supercored 71H, classification E71T-1, diameter 1.4 mm (.055 inches. The following digital picture illustrates welding in progress.

WELDING INSPECTION REPORT

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2 Skin Plate B (upper) NA Weld repair area NA

Mock-Up 114M, Skin Plate B (upper section): ZPMC completed weld repair excavation, material preparation and the magnetic particle test (MT) examination at stiffener plate mp1009 to skin plate MA101, weld #5. Caltrans QA Inspector observed the weld excavation area for workmanship. The weld repair material preparation appeared to be in compliance with contract specifications. Following digital pictures illustrate weld repair location, depth of the weld excavation area and Caltrans QA Inspector's inspection symbol for MT.





Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Hasler,Mike	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer